ECA/NRD/MES/RWM/90/8

REPORT OF THE WORKSHOP ON THE ENHANCEMENT OF THE CONTRIBUTION OF THE AFRICAN NON-FUEL MINERAL SECTORS TOWARDS THE REGION'S ECONOMIC ADVANCEMENT

HARARE (ZIMBABWE),30 JULY-3 AUGUST 1990

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I. ORGANIZATION AND ATTENDANCE

1. The Regional Workshop on the Enhancement of the Contribution of the African Non-fuel Mineral Sectors Towards the Region's Economic Advancement was held in Harare, Zimbabwe, from 30 July to 3 August 1990.

2. The Workshop was officially opened by Honourable J.C. Andersen, MP, Minister of Mines of the Republic of Zimbabwe.

3. The following member States were represented at the Workshop: Angola, Botswana, Burkina Faso, Burundi, Cameroon, Congo, Ethiopia, Kenya, Malawi, Mali, Mozambique, Namibia, Togo, Zambia and Zimbabwe. Also in attendance were representatives of mining and mineral-related industries/institutions and labour unions.

4. The representatives of the following international institutions and other observers were also present: Commonwealth Secretariat, ITDG (UK), Southern African Development Co-ordinating Conference (SADCC), United Nations Conference on Trade and Development (UNCTAD), United Nations Education, Scientific and Cultural Organization (UNESCO), United Nations Development Programme (UNDP) and the World Bank.

II. ELECTION OF OFFICERS

5. The Workshop unanimously elected the following officers:

Chairman:	Zimbabwe
First Vice-Chairman:	Burundi
Second Vice-Chairman:	Ethiopia
Rapporteur:	Burkina Faso

III. ADOPTION OF AGENDA

6. The following agenda was adopted:

1. Opening of the meeting
2. Election of officers
3. Adoption of the agenda and organization of work
4. Enhancement of the contribution of African aluminium, copper, iron and steel industries towards the region's economic advancement
5. Enhancement of the contribution of precious and semi-precious mineral industries (small-scale) towards the region's economic advancement
6. Enhancement of the contribution of industrial minerals towards the region's economic advancement

7. Contributions of member States

8. Contributions of observers (African Intergovernmental Institutions and International Organizations, private mining firms, etc.)

9. Strategy for the revitalization of the African Mining Sector: Recommendations of the Workshop

10. Examination, discussion and adoption of the report of the Workshop

11. Closing session.

7. In addition, the Workshop decided that during the course of its proceedings, technical tours to mining and mineral-related industries in Zimbabwe would be effected for the benefit of all participants.

IV. OPENING STATEMENTS

8. In his opening statement, Hon. J.C. Andersen, MP, Minister of Mines of the Republic of Zimbabwe, welcomed all the participants to Zimbabwe. He noted that the Third Regional Conference on the Development and Utilization of Mineral Resources in Africa which was organized by UNECA in Kampala, Uganda, in June 1988 had concluded that:

> "...the maximum impact which the development of our mineral resources can have on the economic and social advancement of our people could be realized where the requirements of our mining industries are increasingly derived from the region. Furthermore, the outputs of our mining industries must increasingly be converted to consumer, intermediate and capital goods within and for consumption by our countries. Additionally, spending patterns of our countries must be based on goods and services produced in our regional economies".

9. Hon. Andersen further observed that one of the recommendations of the Kampala Conference was that:

> "African and foreign investors should encourage the formation of African mining and mineral-related industries and multinational corporations in which they should invest in order to reduce the over dominance of foreign companies in the sector and allow African countries to exercise their sovereignty over their mineral resources".

10. The Minister pointed out that it was on the basis of the aforementioned that the Kampala Conference recommended that this Workshop should be convened in Zimbabwe, with the participation of representatives of governments, operating mining and mineral-related industries, chambers of mines and their equivalents in commerce and industry, labour organizations, domestic and foreign investors, and other relevant institutions, in order to find ways and means of enhancing the contribution of the African mineral industries towards the region's economic and social advancement.

11. Hon. Andersen informed the Workshop that the mining industry of Zimbabwe produced over 40 different metals and minerals many of which were refined

or processed before they were exported or used as raw material inputs by local manufacturers. He stressed that the mining industry had, over the years, stimulated and aided the growth of other core economic and social sectors in the country, such as manufacturing, energy development, commerce, transport, agriculture and social infrastructure. In addition, the mining industry had contributed substantially to the country's foreign exchange earnings and employment generation.

12. The Minister emphasized that the mining industry's contribution to Zimbabwe's development had been made possible by co-operation between the public sector and the private sector and within the component constituents of each sector. He thus underlined the need for government and the private sector to appreciate and respect the role incumbent on each in the development of mineral resources.

13. With reference to the programme of work for the Workshop, Hon. Andersen urged participants to give particular attention to ways in which Africa could add value to the mineral commodities produced in the region, in order to enhance Africa's industrial growth, mineral consumption, employment generation and export earnings.

14. The Minister expressed the Zimbabwe government's appreciation to the secretariat of UNECA and the Zimbabwean local institutions and individuals for all the arrangements which had been made for the Workshop. He expressed the hope that the guests to Zimbabwe would find the exhibitions mounted by mineral-related industries in Zimbabwe and the technical tours to mining and mineral-related institutions, of interest.

15. Speaking on behalf of Professor Adebayo Adedeji, the Executive Secretary of ECA, Mr. Peter H. Mwanza welcomed participants to the Workshop on the Enhancement of the Contribution of the African Non-fuel Mineral Sectors Towards the Region's Economic Advancement, a meeting which had been organized by ECA and the Government of Zimbabwe, in pursuance of the recommendations of the Third Regional Conference on Mineral Resources Development and Utilization in Africa, which was held in Kampala (Uganda) in June 1990. He thanked the President, Comrade Robert Mugabe and the Government and People of Zimbabwe for inviting African countries to hold the meeting in Zimbabwe and for the contribution of Zimbabwe to the efforts of the Economic Commission for Africa aimed at assisting African countries to achieve self-reliance and self-sustaining economic growth and development. Zimbabwe provided the best environment for the African countries and organizations to share its valuable experience in the field of mining and associated industries.

16. He stated that the objectives of the Workshop were to review the status of the African non-fuel mineral-industries in order to suggest ways and means of enhancing the contribution of these sectors towards the region's advancement. He believed that the way to do this was to put emphasis on analysing the development trends in the African non-fuel mineral sectors. That would include the assessment of national mineral development policies, the capabilities of national support institutions, the investment climate and the regional trends concerning the development of downstream industries based on minerals and consumption of mineral-based products in the continent.

17. Mr. Mwanza then gave an analysis of how the mining sector had gone through a troubled atmosphere during the 1980s in which virtually all aspects including production, investments and exploration activities had gone down due to a number of factors among which were policies of African countries. He said the 1980s had been characterized by an excess of world mineral supply over demand. During the 1970s, the availability of international financing led to a building of numerous projects and, most importantly, to a significant expansion of world supply capacity for most major minerals. The 1980s mining decline was also due to a lower intensity of metal-use in the traditional and major importing countries owing to the growth of non-fuel mineral consuming industries such as electronics. the other factors that had contributed to the decline in the sector were technological substitutions and metal recycling.

18. He concluded the address by calling upon the Workshop to formulate sound strategies to overcome those problems which had beset the industry with a view to restoring it to its previous heights.

19. After the ECA Executive Secretary's statement, the Workshop participants were shown a video on the mining industry of Zimbabwe by the country's Chamber of Mines. This was followed by an address by Mr. E.G. Nqugama, President of the Chamber of Mines of Zimbabwe.

20. Mr. Nqugama informed the Workshop that the origin of the Chamber of Mines of Zimbabwe dated back to 1895 although its structure, organization and roles had evolved and expanded over the years. He stated that the Chamber of Mines of Zimbabwe was a voluntary association of companies and persons with interests in the mining industry. Membership of the Chamber was open to every company involved in mineral exploration, mining, mineral processing, mining supply houses, service institutions for the mining industry, as well as to individuals who had a common interest with employers in the mining industry.

21. Mr. Nqugama pointed out that the Chamber of Mines was the vehicle through which many requirements and problems of the mining industry were articulated to government and State institutions and to other relevant sectors of the Zimbabwe community. The Chamber was thus a unified pressure group that monitored and articulated the mining industry's economic activities to interested parties. The Chamber also had the task of promoting the mining industry within and outside Zimbabwe to potential investors and to suppliers of the industry's needed inputs.

22. The President of the Chamber noted that most of Zimbabwe's large companies or corporations developed initially from a mining base, thereafter diversifying to agriculture, the manufacturing industry, the timber industry, financial or banking activities, the motor industry or various commercial and industrial activities.

V. ACCOUNT OF PROCEEDINGS

Enhancement of the contribution of African aluminium, copper, iron and steel industries towards the region's economic advancement (agenda item 4)

23. A representative of the ECA secretariat introduced document ECA/NRD/MES/RWM/90/1 on the enhancement of the contribution of African aluminium, copper, iron and steel industries towards the region's economic advancement. The document stressed that aluminium, copper and steel were used in various capital-intensive industries such as transport, mechanical engineering, construction and electrical engineering, and for a wide variety of consumer goods. Hence, the higher the intensity of consumption of these basic metals, the healthier would be the economic and social performance of a country.

24. With regard to the availability of raw materials within the region for the basic metals under consideration, it emphasized that increased exploration expenditure was necessary in order to improve knowledge of the region's mineral endowment which could be used for regional development purposes.

25. It also noted that some of the mineral commodities exported by the region in the form of bauxite, blister copper and iron ore could further be processed into aluminium, refined copper and raw steel, respectively, within the region for value-added purposes, for local industries and other benefits where conditions allow. It particularly stressed that increased investment in energy development could enhance aluminium production in the region. Furthermore, the establishment of new copper refining capacities and intensification of co-operation between African countries in the utilization of existing copper refining capacities should be given consideration.

26. The report underlined the need for increased investment in the iron and steel industries, especially in Central, Eastern and Southern Africa in order to enhance the region's economic development, and highlighted the importance of State intervention in the development of this industry.

27. Moreover, owing to such factors as the use of complementary natural resources and the creation of viable markets for metal products produced in the region, the paper proposed that African countries should strive to establish joint, fully integrated aluminium and steel production facilities in the region. The products of these integrated industries and those of the copper industry could then be used to feed jointly owned or national fabricators which could supply the regional economies with products based on aluminium, copper and steel.

28. On the other hand, in order to minimize the perennial problems caused by price deterioration and volatility of mineral commodities and the deteriorating terms of trade between exports of mineral commodities and imports of mineral-based goods, African countries could consider the possibility of acquiring shares in fabricating facilities of countries which import their mineral raw materials.

29. In the ensuing discussion the Malawi representative informed the Workshop that the establishment of an integrated aluminium industry within the framework of the Southern African Development Co-ordination Conference (SADCC) was under consideration. He reported that exploration for bauxite in the SADCC region was in progress and that a detailed feasibility study had been recommended by the Ministers of Mining of the SADCC countries. He expressed the view that although the investment costs were expected to be high (over US$800 million), the sponsorship of the project by the SADCC countries as a regional project might attract the investment required. He similarly expressed the hope that peaceful conditions might soon prevail in Mozambique to allow the Cabora Basa hydroelectric power to be considered for the project.

30. A representative of Ethiopia underlined the necessity of implementing projects only after detailed feasibility studies had confirmed their viability. He particularly emphasized the need to acquire technology and funds for the implementation of such projects.

31. The representatives of Malawi and Zimbabwe expressed the view that an integrated aluminium industry for SADCC could be feasible given the geological resources, energy availability, aluminium demand for the regional economy, and the proposed joint sponsorship of the project by the countries. They agreed with previous speakers that the final decision could depend on the outcome of the proposed detailed feasibility study.

32. The representative of UNESCO informed the Workshop of a project under consideration by Alusuisse during the early 1980s aimed at the production of aluminium in Zaire, based on that country's hydroelectric potential. The World Bank representative informed the Workshop that the Nigerian government recently considered to establish an aluminium smelter based on electricity produced from natural gas but it was subsequently established that the energy costs would be about twice those in Venezuela where hydroelectricity was used. The Nigerian project was thus found to be of no comparative advantage and hence might not be implemented. The Bank representative, therefore, emphasized the need for detailed feasibility studies before projects were implemented.

33. The representatives of Botswana, Ethiopia and Zimbabwe expressed the view that when considering improvements in the region's mining and mineral related industries, Africa could concentrate on areas where the region would enjoy comparative advantage over other world regions.

34. The representative of Rio Tinto (Zimbabwe) expressed the view that where African governments could invest in infrastructure, maintain a conducive political and investment climate and identify their development priorities properly, then conditions would have been largely met for the effective development of the region's mineral resources.

Enhancement of the contribution of precious and semi-precious minerals (small-scale) towards the region's economic advancement (agenda item 5)

35. A representative of the ECA secretariat introduced document ECA/NRD/MES/SSM/90/2 concerning the subject stated above.

36. The document emphasized that the 1980s were marked by an increased interest of African States in small-scale mining of precious and semi-precious minerals already in practice in at least 25 African countries.

37. The reasons for such an increased interest included the labour-intensive nature and low technological and financial requirements of small-scale mining as well as the fact that it could be practised by both the local population and economic operators.

38. The report indicated that between 1981 and 1988, Africa's production of precious and semi-precious minerals had registered a cumulative growth of about 40 per cent for gold and 53.60 per cent for natural diamonds in which small-scale mining had played an important role.

39. It however emphasized that prospects for further growth in production were gloomy owing to inadequate national legislative, institutional and structural policies and, therefore, recommended that African States should reformulate their legislations and set up technical support and financial and commercial structures for the benefit of small-scale mining operators, drawing the attention of participants to the example of Zimbabwe which possessed such structures.

40. The paper further pointed out that poor investment climate constituted an impediment towards the development of precious and semi-precious minerals in the region. It therefore, suggested the improvement of such an investment climate, thereby enabling private national and foreign investors to make a positive contribution to the production of these minerals.

41. Moreover, the document noted that the maximum positive impact that precious and semi-precious minerals were expected to make on the economies of the States, subregions and region would only be possible through the establishment of such multinational industrial units as mineral refining, gem-cutting and jewellery making industries as well as through an increased consumption of mineral products within the region. To this end, both the States and economic institutions in the subregion were called upon to study all the relevant possible avenues.

42. The report drew the attention of participants to the limits and dangers associated with small-scale mining of precious and semi-precious minerals and proposed legislative, structural and organizational measures to counter such real dangers posed to the social and physical environment.

43. Finally,the document underscored the fact that success in the implementation of the various measures suggested at the national policy industrialization, consumption and environmental levels must be through a solid inter-African interaction in the development of mineral resources, in general and precious and semi-precious minerals, in particular. To this end, it recommended that a sub-commission with institutionalized functions should be set up in each subregional grouping to be specifically responsible for the development of mineral resources.

44. The presentation gave rise to a lively debate and an enriching exchange of views.

45. The representative of Burundi observed that the problem of control of small-scale mining varies in accordance with types of such operations, adding that it was more complex for uncontrolled artisanal mining. However, he emphasized that certain States have yet to find solutions to the reluctance of private national and foreign investors to stake in small-scale mining operations, considered unreliable.

46. The representative of Minerals Marketing Corporation of Zimbabwe (ZIMCO), for his part, proposed that the risk of fraud notwithstanding emphasis should be granted to private local investors who should be given sales licences valid for specific areas.

47. The representative of Namibia underscored the need for a policy specifically aimed at checking black marketeering which had been very difficult to control.

48. The representative of UNCTAD cited the experiences of Thailand and Indonesia with regard to the system of placing exploitations under the supervision of local authorities. He however said that, in the case of Thailand, the unorganized nature of such a practice in neighbouring States constituted a handicap. This observation thus justified the need for subregional co-operation.

49. The representative of Ethiopia began by emphasizing that the lack of a body of laws to control the exploitation of precious and semi-precious minerals had allowed operators to carry out illicit practices, resulting in losses to the State; hence the current moves to establish an official system of laws. He then cited the case of Ghana where a State corporation was responsible for issuing licences.

50. The representative of the World Bank expressed scepticism about State intervention in this field. He even went on to state that the development of fraud might be linked to the intervention of governments, which generally failed to comply with market prices.

51. The representative of Cameroon, for his part, underlined that the cost of State intervention should be evaluated in relation to its benefits.

52. The representative of Burkina Faso briefed the Workshop on the efforts currently being deployed by his country to create a processing industry (jewellery) and the measures taken by his government to protect gold deposits, control its movements, organize its marketing and to involve private economic operators in the collection of products from gold washing.

53. The representative of Ethiopia cited the examples of the impact of the legal measures taken in Brazil and Guyana on the increase in the output of their small-scale operations. He, therefore, underscored the need for caution with regard to control the cost of which could increase that of final consumption. Finally, he emphasized that given the exorbitant value-added of processed precious minerals, serious studies should be carried out on the ways and means of processing them in Africa.

54. The representative of Burundi observed that one of the major obstacles to the promotion of small-scale mining operations was the weakness of national economies.

55. Responding to these interventions, the representative of the secretariat underlined the importance of (a) proximity of sales offices to production sites (b) cash-down payments and (c) sensitization of gold washing operators and buyers.

56. In conclusion, participants acknowledged the role that small-scale mining operations had to play in enhancing the contribution of precious and semi-precious minerals towards the economic advancement of Africa. They also thanked the secretariat for its study on this subject and for giving them the opportunity to exchange information and views.

Enhancement of the contribution of African industrial minerals towards the region's economic advancement (agenda item 6)

57. A representative of the ECA secretariat introduced document ECA/NRD/MES/RWM/90/3 on the enhancement of the contribution of industrial minerals towards the region's economic advancement. The paper reviewed the situation of phosphate, potash and building material industries in Africa during the period 1981-1988 and analyzed the trends in and prospects for these industries in the 1990s. It also suggested ways and means of enhancing the contribution of these minerals towards the African mining sector and the region's economic advancement.

58. With regard to phosphates, it was stated that between 1981 and 1987, western European countries, the major market for African phosphates and phosphate-based products, were saturated and experienced a steady decline in their use of fertilizers. African countries thus had difficulties in marketing their production, owing to low prices, poor demand and competition mainly from such new producers as Jordan and Israel. The situation also led certain African countries to increase the amount of phosphates produced for local consumption, especially for the production of phosphoric and auxilliary fertilizers.

59. In spite of improvement in external marketing of African phosphates and phosphate-based products in 1988 and owing to the exhaustion of the Christmas Island phosphate reserves in Australia, which led to access to that market by Togolese phosphates, and to increase in quantities purchased under former agreements, there would be no a priori significant change in the supply of western Europe with African phosphates and their derivatives in the 1990s.

60. The report underlined that the local market in Africa should play a greater role in the current decade, particularly, with population growth and the great need to modernize agriculture in the continent. This market was small at national levels, but the emergence of subregional and regional markets could resolve this problem.

61. The report also pointed out a number of strategies developed by some African countries aimed at capturing markets mainly through the inclusion of diamonium phosphate (DAP) among products derived from phosphates, as in the case of Morocco, which helped this country to compensate for the losses incurred in its sale of crude phosphates to western Europe and Asia.

62. Problems of financing expansion programmes and projects for the development of new deposits were also discussed as well as considerations with regard to environmental problems. Regarding the latter point, it was stated that although the non-imposition, so far, of environmental restrictions in Africa had facilitated the development of integrated phosphate industries, the continent should be cautious about the dark side of the picture which involved the risk of water and air pollution by products such as NPK, and the rejection by certain European countries of these products for reasons of standards and loss of foreign exchange from the importation of sulphur necessary for these industries.

63. Concerning potash, it was noted that there was no production of this commodity in Africa and that Congo and Ethiopia had vast potash resources, the development of which would depend on world demand and supply. With regard to supply and demand, it was underlined that after three decades of rapid expansion following the rise in agricultural production in Europe and North America, the world demand for potash had stagnated between 1980 and 1987 and it was difficult to know if the recovery noticed in 1988 in the demand for potash would continue in the 1990s. But the expected closure of old mines in western Europe and the United States, following the exhaustion of potash reserves by the end of the 1990s, could be of interest to African producers.

64. On the environmental problems caused by potash industries, the possibility of nitrogen concentration in underground water was underscored and African countries were invited to take account of this factor, both for the protection of their own environment and for access to European markets which would become increasingly difficult to satisfy.

65. Turning to building materials, the document stated that these mineral commodities were given secondary importance by many African countries in the priorities of their national development plans for mineral resources development. Hence information on them were rare and incomplete.

66. Furthermore, Africa's demand for essential building materials would strictly depend on the rate of construction work and remained little developed especially in Sub-Saharan countries and which constituted a potential local market currently being satisfied by imported sources. Several African countries were currently conducting research to identify less expensive materials which would contain little amounts of such imported inputs as cement in order to reduce their dependence on imported construction materials thereby promoting local development of such substances in the long term.

67. After analysing the constraints to the development of building materials in Africa, the major possible measures which could be considered by member States for the promotion and development of their building material industries. Such measures included assessing their knowledge of available resources, supplying relevant information and data to the interested public and investors, encouraging the establishment of production units and setting up a structure to be responsible for product quality standards and control.

68. In the ensuing discussion, the representatives of the World Bank pointed out that some measures suggested in the case were inconsistent with the economic policies adopted by the Sub-Saharan countries in recent years, adding that royalties should be paid.

69. The representative of UNCTAD who agreed with the World Bank on this point indicated that trade liberalization was a major constraint to the development and success of building material industries in Africa. Emphasis, he said, should be placed on the lack of information, especially on the end uses of products and on processing procedures.

70. Responding to the UNCTAD representative's observation on the need for information on construction materials, participants expressed the view that a regional or subregional centre to be responsible for the collection, processing and dissemination of information on construction materials should be created.

71. The representatives of Namibia, Togo and Zambia gave information on the status of the building material and phosphate (Togo) industries in their respective countries and some of them pointed out the need to include dimension stones among building materials.

Contribution of member States (Agenda item 7)

72. On this agenda item, representatives of member States made their contributions on their individual countries' mining legislations, policies and potentials.

Namibia

73. The representative of Namibia briefly highlighted the status of his country's minerals industry, which he said constituted the backbone of the Namibian economy. In 1989, Namibia produced minerals to a value of US$600,000,000 during which period were produced, inter alia, diamonds (900 000 ct), Uranium, copper (50 k ton), pyrite (90 k ton), lead (40 k ton), zinc (30 k ton), cadmium (10 ton), tin (1.2 k ton) arsenic, antimony, litnium, silver, gold, beryl, fluorite, salt, silica, granite and marble.

74. He said that diamonds were sold through the CSO and no cutting or polishing facilities existed in Namibia. Uranium was exported in the yellow cake form. A copper and a lead smelter were operative at Tsumeb and toll smelting was also undertaken. The total mineral production of Namibia grew on average by about 4.5 per cent per year in real terms between 1950 and 1975, since when no real growth had been experienced owing largely to a general decrease in diamond production. In 1988, he said, mineral exports accounted for 35 per cent of total exports and the minerals industry contributed approximately 25 and 20 per cent of the GDP and the total government revenue, respectively. He added that an investment code on such important issues as security of tenure, repatriation of profits, foreign exchange and nationalization was being drafted and that the Government was also reviewing the mining, mining taxation and natural oil and gas exploration and production legislation, which were planned to come into force by the end of 1990.

75. Finally, he said that his Government had put a high premium on training of Namibian citizens in mining-related fields and was about to establish a school for training in mining technology.

76. In the discussions that followed, questions were raised on diamond downstream industries such as cutting and polishing, the involvement of Namibian Government in the establishment of a geological map of the territory and on information and a data-bank on mineral resources. The representative of Namibia indicated that Namibia with its long history in mining of diamonds, had long-term contracts with CSO related companies which could be eventually renegotiated in order to include provisions for local diamond cutting and polishing, but this had to be done cautiously. He added that the Geological Survey which was currently facing staffing problems, once expanded, would increase its geological survey activities to improve information and data needed for mineral exploration.

Malawi

77. The representative of Malawi mentioned that the mining industry in Malawi was in its infancy. At the moment, the only significant mining operations included extraction of coal; quarrying of limestone for direct use and lime and cement manufacture; quarrying for building/road aggregate; extraction of clay for brick making and potteries/ceramics and small-scale mining of gemstones. In spite of a considerable minerals potential, there has generally been a lack of serious interest by the private sector to invest in exploration and mineral development in the country. In view of this situation, the Government had taken some deliberate measures aimed at attracting investment

in the mineral sector. A comprehensive mines and minerals Act has prepared and enacted in 1981. A promotional brochure inviting the investor to participate in the country's minerals development effort was to be published shortly under the title "The Mineral Resources of Malawi - New Opportunities for the Investor".

79. In the ensuing discussion, some participants raised questions on protection of small-scale miners and on choice and size of exploration sites in a situation in which there existed a non-exclusive prospecting licence. Responding, the representative of Malawi explained that a non-exclusive prospecting licence was valid for one year and covers only one out of the 24 districts in Malawi. The operator was free to make his choice of the district and there was no restriction with regard to the number of minerals he could prospect. He concluded that so far, adequate legal provisions had been made to provide security for the small-scale miner.

Burkina Faso

79. The representative of Burkina Faso in reviewing his country's experience in the small-scale mining sector, observed that the country had many mining potentials which were, however, still at the rudimentary stage with only one gold producing industrial unit and numerous small-scale gold mining operations-artisanal and semi-industrial.

80. Artisanal gold mining, a very old practice which had previously disappeared had reappeared and was practiced intensively in 1984 in the North of Burkina Faso which had been a victim of serious drought and famine. This activity, which had emerged as a saviour for the people of that region, had contributed significantly to the economic development of the country.

81. The upsurge in the activity had however led the government to take measures aimed at organizing and controlling production, transport and marketing of gold produced from artisanal operations. Such measures had resulted in very positive developments.

82. However, the developments had called for the formulation of new strategies for the sector, to be supported by strategies aimed at stimulating its harmonious development.

83. Reacting to this intervention, participants inquired as to what measures were being taken to solve the social and control problems and to provide assistance to the exploiters. The representative of the World Bank also asked for information on the Perkoa Zinc agreement.

84. Speaking on the social problem, the representative of Burkina Faso replied that a study financed by UNDP had made it possible to identify these problems as well as the relevant actions to be taken and that such actions were already under way. As for control, he said that it was being carried out on the sites through the issuance of cards. Finally, assistance was being granted to the miners by providing them with explosives and compressors for ore extraction.

85. As for the Parkoa Zinc, he said that the participation of the World Bank during the first stage of research and the support it provided in the dissemination of the promotion document had been very significant especially with regard to the agreement for the establishment of a joint venture.

Mozambique

86. The representative of Mozambique informed the Workshop that though his country did not have a long mining tradition, the Government had, since independence (1975), initiated a number of legislative, financial, institutional and mineral exploration activities which had since led to substantial interest by potential investors. To this effect, many mining agreements had been entered into between the Government and foreign investors covering a wide range of minerals. Similarly, several exploration and mining licences had been issued to local entrepreneurs. Confidence was expressed that with improvement in the security situation in the country, Mozambique would in future be a significant mining country.

87. In response to clarifications sought during the discussion of the paper, the representative of Mozambique said that small-scale mining operators in his country could benefit from loans from the Government for their operations. It was further pointed out that Mozambique did not have a fixed tax action system for the mining industry but that this was a matter negotiable between the Government and each mining investor. The Mozambique representative added that there were several countries and institutions which were assisting the country with manpower training for the mining industry.

Botswana

88. The representative of Botswana gave a background on the mining policies in his country underlining policy objectives identified by the Government which included maximizing the rate of prospecting, developing deposits, increasing net inflows from the mining sector, encouraging substantial returns to investors and promoting and/or encouraging the provision of local raw materials and manufacturing inputs for the minerals sector.

89. The environmental provision also addressed in those policies required that any major mineral development project should include a full assessment of its impact on the environment.

90. Mineral policies and legislation, he added, were currently under review. In the resultant discussions, the representative of Namibia pointed out that the low level of employment in the diamond industry, mentioned by Botswana should not be looked at as a negative factor. Revenues from the diamond sector would be channelled to such other sectors as agriculture, with a high rate of employment. He also asked for information on the possibility of investors or potential investors obtaining data and information held by a company on a deposit declared non-economical.

91. In response to this question, the representative of Botswana explained that the tendency was for a mining company which had established information after prospecting to hold right to such information for as long as it held a prospecting licence. This licence, he said, was valid for three years, but the company could ask for extension for another three years. At the expiration of the extension period, the company was required to hand the information over to the Botswana Geological Survey which could make it available to investors or potential investors.

Burundi

92. Speaking on the development of the non-fuel mineral sector in his country, the representative of Burundi said that the mining sector in his country was relatively small, compared to those of other countries.

93. He pointed out that the systematic research company established only in 1989, with UNDP assistance had already succeeded in developing deposits of such minerals of economic value as (a) nickel (200 million tons with 1.6% of Ni mixed with copper, cobalt and platinum-related elements), (b) vanadium (12 million tons with 0.6% of V mixed with iron and titanium and (c) phosphates (12.7 million tons with 12% of P_2O_5).

94. The existing low mineral production, usually of gold, cassiterite and various construction materials was based mainly on artisanal and semi-industrial mining operations.

95. He added that in order to secure an efficient development of its mining sector, Burundi had adopted a clear policy whereby the setting up of (a) a programme to develop already discovered deposits considered to be of economic value, such as those of nickel and vanadium which would imply the opening and support of a relevant company to be financed by donors, as well as regional and international co-operation, (b) a programme for the prospecting and mining of such high-unit-cost elements as gold, cassiterite and basnaesite and (c) a programme for the prospecting of such industrial minerals as phosphates, cement bearing substances and construction materials, with a view to establishing an import-substitution industry.

96. In response to the question raised by the representative of Namibia on the marketing of tin, the author indicated that production by small-scale miners were sold to local licensed buyers who in turn sold to private entrepreneurs through agreements directly negotiated by the two parties.

97. Taken on the extension of Burundi's nickel deposits into neighbouring Tanzania, and on whether there existed any co-operation scheme for a joint Tanzania/Burundi development of the deposit, the representative responded that there had been preliminary contacts between Tanzania and Burundi, aimed at defining a joint strategy for the development of the deposits.

Congo

98. The representative of the Republic of Congo said that since the discovery of the first traces of minerals in his country as far back as the end of the last century, little had been done in the field of research and exploitation. The oil crisis, he said, ought to have offered the Republic an opportunity to review its mining policy through the new objectives defined during the mining meeting held in Brazzaville from 9 to 11 March 1986, for the deepening of geological and mining knowledge about such valuable minerals as gold, poly metals, iron and phosphates. In order to develop these objectives, efforts had been made by the Congo to undertake joint actions with its neighbours.

99. Currently, an elaborate programme aimed at studying new deposits of polymetallics, cassiterites, wolfram and gold were under way.

100. During the debate that followed, the representative of Cameroon requested information on the role of the multinational Central African Mineral Resources Development Centre based in Brazzaville and on its contribution in the development of mineral resources of its member states.

101. In response, the representative of the Congo pointed out that the objective of the Centre were to provide its member States with special advice and laboratory services in the field of mineral resources. A representative of the ECA secretariat emphasized that more information was available at the ECA secretariat.

Ethiopia

102. The representative of Ethiopia said that the Lega Dembi gold mine which would soon be commissioned would produce 3 tons of gold annually from a deposit of 30 tons proven and 50 tons drill-indicated reserves. Tantalum production had recently begun. The Ethio-Libyan joint mining company, originally established to explore and develop the potash deposit in the north east of the country, was responsible for the quarrying of dimension stones like marble and granite.

103. Recently, the Ethiopian Government had embarked on a comprehensive re-evaluation of its economic policies. The result of this economic policy reassessment culminated in the formulation of a new investment law, allowing the establishment of joint ventures to facilitate and promote investment by both local and foreign investors.

104. The Ethiopian Government benefitted from UNDP technical and financial assistance in the development of appropriate mining laws.

105. Questions on the mining production of Ethiopia were raised by some participants. In response, the author indicated that 800 to 900 kgs. of gold were produced every year. To this should be added in a near future 3 tons per year of gold from Lega Dembi which contained reserves amounting to 30 tons. Ethiopia also produced 200,000 ons of soda ash per year.

Kenya

106. The representative of Kenya stated that economic policy of his Government was one of free enterprise and the Government had enacted several Acts of Parliament to encourage and attract free enterprise. He added that his Government was not engaged directly in the exploitation of mineral resources.

107. Rather, he said, Mines and Geological Department, under the Ministry of Environment and Natural Resources, was charged with the responsibility of mineral resources development, including formulation and administration of policies relating to the exploration and exploitation of minerals.

108. In its endeavour to promote mineral resources development in recent years, the Department had undertaken various mineral exploration programmes which included regional geological mapping, regional drainage, sediment and soil geochemical surveys, airborne and ground geophysical surveys and assessment of industrial minerals. The Department's laboratories and drilling equipment supported not only its mineral exploration programmes but also the private mining sector.

109. He concluded that mining policies must be formulated and implemented in order that it would enable mineral development to contribute its share to the national economy. To this end the existing legislation was reviewed time and time again to keep abreast of the changing investment and other legal requirements. Currently, the Department was revising the Mining Act vis-a-vis other acts.

110. In response to a question by a representative of Zimbabwe, the author mentioned that officially a small scale miner would report 2 or 3 kg. of gold were produced every year when the true figure might even be higher.

111. The representative of Botswana cited a study conducted by Charles Johnson wherein geological potential, political stability and an enabling mineral development policy were ranked as the most important factors affecting investment flows in the mining industry (Mining Journal Vo. 314 No. 8072, 25 May 1990).

112. The representative of the World Bank seconded the comment of Botswana and indicated that the results of the mentioned survey were similar to those of the survey carried out by the World Bank on the African mining sector, contained in the paper submitted to the Workshop. The main concern of the Workshop should be, he added, to analyze the causes of the poor performance of Africa in the field of mineral resources development over the last thirty years, in spite of its tremendous mineral potentials.

Togo

113. The Togolese representative said that aware of the strong dependence of his country on a single mineral, phosphate, his Government had developed a programme aimed at diversifying its underground resources.

114. The programme, he said, involved the following:

(a) The establishment of a geological map at 1/200 000 of each economic region and a synthesis of all the maps at 1/500 000. This phase had been concluded since 1986;

(b) The strategic geochemical prospecting of the whole national territory - a phase currently under execution; and

(c) The drafting of a mining code that would attract potential private investors.

Zambia

115. The representative of Zambia stated that in spite of its tremendous mineral wealth, Zambia's economic sectors were dominated by copper mining. At independence, Zambia continued with policies of the pre-colonial state more or less unaltered. Foreign companies retained ownership and control of both administrative and operational aspects of the mining industry. The Government now controlled the mining activities according to the Mines and Minerals Act of the country.

116. He added that a new system of mining rights which gave power to the state had been introduced and that over the years, the Government had developed a policy aimed at diversifying the mining sector to embrace exploration and development of other minerals.

117. In fulfilling and implementing this mineral development policy, a number of support structures had been strengthened including the Ministry of Mines, educational and training institutions and technical and research facilities. With regard to education and training, the Government had established a school of mines at the University of Zambia and a Mining Department at the Copperbelt University. Both institutions were operating at only 10% of their capacity.

118. In the ensuing discussion, the representative of the World Bank pointed out that the result of the extreme dependence of the whole Zambian economy on copper, the prospects of which were rather bleak in the 1990s should have been mentioned. He also inquired whether Zambia had taken any measures to face this situation. In his response, the author indicated that Zambia's concern was to sustain current mining operations in order to maintain its current levels of foreign exchange earnings and Government revenue and to diversify at the same time the mineral resources development base by promoting gemstones, industrial and fuel mineral industries.

119. A representative of the ECA secretariat inquired about the causes of the low level of utilization of training institutions in Zambia and wondered if these facilities could also used by other members of SADCC. The representative of Botswana seconded this observation.

120. In his response, the author indicated that manpower training within SADCC was the responsibility of Swaziland. However, efforts had been deployed by the SADCC Mining Unit to supplement Swaziland. Accordingly, SADCC mining sector training was now an activity which was being actively pursued by the

SADCC Mining Unit based in Zambia. The unit had been granted funds from EEC to carry out a survey on the needs of SADCC in the field of training in the mineral sector, including an assessment of available institutions within the subregion. One of the likely outcome of the survey would be a recommendation on the use of Zambia's School of Mines and the other facilities in Zimbabwe and Mozambique by all SADCC countries.

Contributions of observers (agenda item 7)

World Bank

121. The representative of the World Bank observed that in order to unlock Africa's mineral wealth, substantial investments in exploration and mine development were required. The bulk of the financing, together with the technical and management expertise, would have to come from foreign private investors, while bilateral and multilateral financing sources would have a complementary role.

122. It was pointed out that International mining companies had invested little in Africa in recent decades, mainly for two reasons:

(i) Information on the mining environment in many African countries was inadequate; and

(ii) African governments had not developed an enabling environment of economic sector policies which private foreign companies considered favorable for mining investment.

123. Overcoming the information gap that international mining companies experienced with respect to the mining environment in most African countries would require a concerted effort by the national institutions involved in mining. The cost of this effort would be relatively small but the effect in terms of increased investment could be considerable. Two measures had proven effective in several countries to achieve the objective of improving the availability of information on the national mining environment. Firstly, the national Ministry of Mines or the geological survey institution should organize the geological data base more effectively than was currently the case in most African countries. Secondly, an investment promotion center which would provide sector information to potential investors as well as operate as a one-stop facility for processing of investment applications would be effective in African countries which tend to have complex administrative procedures for implementation of mining projects.

124. The creation of an enabling environment for mining investment involved several difficult decisions. Governments had to make a fundamental decision with respect to ownership and control of mining operations. The results of the survey of international mining companies were straight forward in this respect. Mining companies would normally not invest in any country without obtaining equity majority and operational control. However, governments should recognize that there were instruments other than majority ownership to carry out legitimate national interests in the mining sector. Investment and mining codes as well as project-specific agreements would normally provide adequate bases for effective government control of the mining sector.

125. A second issue of creating an enabling environment for private mining investments referred to the fiscal arrangements for mining operations. Taxation (and, in many African countries, foreign exchange) arrangements determined the distribution of the project benefits between the government and the private investor. Equitable taxation and foreign exchange arrangements were crucial, because excessively high tax rates discouraged investors, while low taxation might leave the country with an inadequate compensation for giving up its mineral resources. Fiscal issues of mining required careful analysis to strike the proper balance between the reasonable compensation of the government and adequate investment return for the foreign investors. With respect to the sharing of benefits of mining projects, the survey of mining enterprises had provided an interesting result. Countries perceived as favorable for exploration and investment -- e.g. Botswana and Ghana -- had fairly high rates of mineral taxation. It appeared that a favorable and stable economic policy environment, including the government's attitude toward foreign mining investment, tended to more than off-set relatively high tax rates.

126. In the discussion which followed the SADCC representative informed the workshop that the World Bank was currently undertaking a mining sector policy study within the SADCC region intended to harmonize national policies and promote increased investment in the mining and related industries.

127. In response to enquiries, the World Bank representative emphasized the necessity for co-ordination of the work being done by international organizations in the field of mineral development policy in the African region. He further informed the Workshop that the Bank placed great interest in small-scale mining as this sector was capable of creating employment and incomes in rural remote areas of African countries.

UNCTAD

128. The observer from UNCTAD noted that the importance of the African mineral sector from the world perspective had decreased over the last decades and that interest on the part of major mining companies to carry out exploration in Africa had largely disappeared. He informed the workshop about activities within UNCTAD with regard to minerals and metals, emphasizing in particular the trend in recent years towards the establishment of international study groups for metals including nickel, copper, tin and, most recently, bauxite/alumina/aluminium. These study groups were likely to play a useful role in undertaking research, development and market promotion under the financial backing of the recently established Common Fund for Commodities. He stated that UNCTAD was currently developing a computer-based information system on commodities, including minerals and metals.

129. Furthermore, UNCTAD was undertaking a research/technical assistance project aimed at studying the role of the mineral sector in the development process in developing countries. This project took as a starting point the observation that the economic performance of developing countries, highly dependent on export earnings from minerals and metals, was less favourable than that of other developing countries. The question was therefore whether

there was a structural relationship between mineral dependency and low economic growth and, if not, how economic growth could be increased in these countries. The objective of the UNCTAD project was to discover, promote and support those measures and policies which were most likely to enhance the contribution of the mineral sector to the overall process of economic growth and development. The project consisted of several areas of activity, including detailed statistical analyses, country case studies, issue oriented analytical studies and a series of seminars, both regional and inter-regional. A regional seminar for Africa was planned for early 1991.

Small-Scale Miners Association of Zimbabwe

130. The secretary of the Small-Scale Miners Association of Zimbabwe said that his Association was a voluntary organization established in 1987 to help small-scale miners who had rushed into mining since independence in 1980. Previously colonial laws did not permit black ownership of mining rights.

131. He reported that the Association (a) provided advisory services to small-scale miners, (b) organized periodic seminars and workshops on various subjects of interest to small-scale miners in collaboration with the Ministry of Mines, (c) disseminated relevant information to small scale miners, and (d) promoted and supported the procurement of mining supplies for small-scale miners.

132. He recommended that workshops like the current one should always include mining companies, including small-scale mining firms, to allow for a more beneficial exchange of views, especially as these were the implementers of plans, programmes and policies in the mining industry. He further suggested that the establishment of regional newsletters, research and training centres should be encouraged to facilitate the exchange of information, for solutions to common problems, and manpower development in the African small-scale mining industries.

133. He added that the Association was an advocate of market decentralization in order to facilitate the sale of gold and precious stones in Zimbabwe. He expressed his view that the Association's dialogue with the Ministry of Mines regarding decentralization of marketing of gold and gem stones would be facilitated by the interesting marketing systems of Brazil, Cuba, Sri-Lanka and Papua Guinea which were outlined at the present workshop. He expressed his belief that decentralized marketing would lead to open marketing competition, eliminate illegal mineral dealers, and increase state gold/gem stones revenues.

134. In order to meet their need for a forum through which to express their views and requirements, small-scale miners in Zimbabwe used the Association's newsletter and the Shamva Service Centre. The latter provided training, technical service and mining facilities which were too expensive, especially for individuals.

135. He concluded by saying that rural development, through small-scale miners had a great potential as agriculture and mining provided the bulk of foreign currency earnings, increased employment, and reduced population drift to urban centres where housing, transport and employment problems were serious.

SADCC

136. The representative of the SADCC Mining Sector Co-ordinating Unit said that since inception in April 1980, SADCC had made efforts aimed at developing the mineral sector of the region so as to reverse the trend during most of the colonial period when mining was geared towards the production of mineral raw materials for export to developed countries as inputs for their industries. Consequently, mining was developed as an economic activity in complete isolation from the rest of the economies of most member States. The only contribution of the mining industry to the economies of member States was in the form of foreign exchange earnings, revenue generation and employment creation, although it was common knowledge that mining had the potential to contribute even further through forward and backward linkages, and integration into such sectors as industry and agriculture. The pursuance of SADCC policies aimed at such integration would lead to the development of local resources based on industrialization and agricultural development. These, the representative said, were some of the issues that had pre-occupied the SADCC mining sector resulting in the formulation of policies, programmes and projects with a view to reorienting the traditional role of the mining industry so as to derive increased benefits for member States.

PTA

137. The representative of the Preferential Trade Area for Eastern and Southern African States (PTA) reported that the objective of PTA in the non-fuel mineral sector was to establish a viable metallurgical industries sub-sector because of its vitality in the industrialization process. The manufacture of a wide variety of consumer goods required accelerated growth of the intermediate industries providing such inputs as iron and steel, aluminium and other metallurgical products which, in turn, depended on the exploitation of vast mineral resources of the subregion, in particular iron ore, coal, copper, chromium and nickel.

138. The PTA representative in particular stated that feasibility studies had been carried out in many PTA countries on the establishment of iron and steel plants. With regard to other minerals and metals which were considered equally important, and were significant to the PTA's economies, the PTA policy organs had approved the establishment of a metallurgical technology centre (Research and Development Institute) for research and development in the sector.

VI. STRATEGIES OF THE REVITALIZATION OF THE AFRICAN MINING SECTOR: RECOMMENDATIONS OF THE WORKSHOP (Agenda item 9)

139. The following constitute strategies and recommendations for the revitalization of the African mining and mineral related sectors also agreed by the Workshop on "The enhancement of the contribution of the African non-fuel mineral sectors towards the region's economic advancement", held in Harare, Zimbabwe from 30 July to 3 August 1990.

1. BASE METALS

140. The Workshop recognized the scarcity of investment funds for exploration, development, mining, processing and fabrication in the African region. In this respect, the Workshop recommended the following measures intended to improve the situation:

A. Mineral Legislation

141. Mineral legislation was seen as the instrument which informed the investor on the crucial question of the manner of acquisition of property rights over minerals, while giving a view of the states' attitude to the question of mineral property and its expectations with regard to their development. The enhancement of the possibilities for increased financial resources flowing to the sector was best accomplished by:

(i) The enactment of mineral licensing legislation which facilitated the easy and assured progression through the mineral product cycle by investors. In the formulation stages of such policies and legislations, governments should consult relevant organs of national private sector investors.

(ii) The reduction to a minimum of possible unilateral government actions particularly with regard to equity and control, and the disposal of fixed movable assets.

(iii) In the event of the exhaustion of national judicial remedies for the settlement of investment disputes between the state and the foreign investor, then recourse should be had to international fora for dispute settlement.

B. Fiscal Arrangements

142. The divisioning between the state and the investor of the returns from a mining project was crucial to the decisions of the investor to commit his financial, entrepreneurial, technological and other resources, and governments to decide to grant rights over the minerals to the investor. It was recognized that mining as an economic activity was subject to high risks of a geological, commercial, and political nature, while requiring large amounts of capital, which were only recoupable over long time frames from the time of the initial investment in exploration. Consequently, investment would seem to flow best in those circumstances where:

(i) the governments enacted fiscal arrangements which allowed for the high risks attendant to mining projects. This, among other things, would entail provisions for rapid recoupment of investment while keeping to a minimum, levies which had negative impacts on the economics of the project.

(ii) the provision of exchange control measures which guaranteed the ability of the investor to service his operations, repay committed indebtedness and repatriate profits after all local obligations (e.g. tax, royalties, procuring of local materials and services, training and employment of citizens and environmental protection) had been met.

C. Development Objectives

143. It was recognized that minerals were subject to exhaustion and the possibilities for the maximum contribution to the economy were best facilitated when every attempt was made to effect the imersion of the mining activity in the wider economy. This could best be accomplished by government policy which:

(i) emphasized to a maximum extent possible, relevant training for the mineral and allied industries;

(ii) facilitated the addition of value to mineral commodities consistent with the availability of real financial and economic opportunities for doing so;

(iii) ensured as great a degree of localization consistent with efficiency;

(iv) provided for necessary measures aimed at protecting the environment. These measures should constitute an integral part of the mineral development agreements;

(v) took responsibility for the creation of an appropriate geologic data-base by the production of appropriate regional maps etc.

(vi) allowed state mining enterprises, to operate to as great an extent as possible, in the mineral industry as independent commerical entities;

(vii) allowed for the provisioning by the government of the necessary infrastructure (roads, power, water supply, etc.) where feasible, in order to promote mineral development. Such infrastructure should be linked to the overall national development priorities.

D. Regional Issues

144. Opportunities for growth and development could, in large measure, be augmented in the circumstances where the available market was large enough to allow for increased efficiencies due to increased scale economies. The opportunity for greater rationalisation of available resources must also contribute to increasing output, income and employment where the market is large enough to allow for specialization in its various regions. Consequently, the African region could benefit from:

(i) Government policy which recognized the opportunities for the pooling of resources and hence reduce their individual risks in the development of financially feasible projects, which would otherwise be outside the financial and the resource capacity of their respective states.

(ii) Governments in the African region identifying and supporting a Regional institution which would act as a centre for information collection and dissemination on opportunities for mineral production and consumption in their respective countries.

(iii) Regional governments fostering studies on alternative uses for existing mineral products and other efficiency considerations, in order to maintain and improve on their existing market share.

(iv) Regional governments identifying and supporting opportunities for training, which were available in member States for the minerals industry.

(v) Regional governments, enterprises and operators making greater use of existing processing capacity, which might be available in member countries and to rationalize to as great an extent as possible, the processing, production, and use of mineral by-products.

(vi) Regional governments facilitating the easy movement of mineral products among member countries by providing appropriate trade guidelines.

(vii) Governments encouraging and facilitating cross-border investment by their national institutions in the mining and mineral related sectors

(viii) Governments encouraging and facilitating the establishment of African transnational mining and mineral related corporations for the development of African mineral resources.

(ix) The ECA secretariat in collaboration with other relevant international and regional institutions assisting African governments in the areas of mineral policy development and contractual arrangements.

2. PRECIOUS AND SEMI-PRECIOUS MINERALS

145. Scarcity of funds for the large-scale exploration, development, mining and processing of these minerals in member countries in the African Region was also underlined by the Workshop as in the case of base matals. Hence, strategies for solving this problem were the same as those identified above in the discussion on base metals. Because of the opportunity for the creation of a national mining ethic, and the contribution to increased income, foreign exhcange earnings and employment presented by the development of precious and semi-precious minerals at the artisanal and small-scales of operations, national governments should endeavour to promote and foster this form of mining. A specific legal and fiscal regime should be created for this class of mining and among some of the considerations:

(i) The alienation procedures must emphasize some exclusivity in the mineral rights for artisanal and small-scale operators.

(ii) Marketing arrangements should involve the placement of outlets as close as possible to production sites and should emphasize the usefulness to engage private licensed traders either in competition with or operating in conjunction with a government marketing agency.

(iii) Pricing procedures and price levels should be guided entirely by the market process.

(iv) A range of incentives (e.g. technical assistance, funding, foreign exchange retention programmes, and other measures of this kind) consistent with the circumstances of operators in this sub-sector should be provided.

<u>Regional Issues</u>

(i) Member governments should identify and support efforts aimed at training small-scale miners.

(ii) Member governments should identify, and support a regional institution in the provision of funding for small-scale mining development to ensure their orderly and efficient operation.

(iii) Member governments should identify the opportunity to manufacture implements for artisanal and small-scale mining and for the sourcing of implements required for manual and small-scale operations in member countries.

(iv) Member countries should liaise and consult on measures aimed at combatting illegal trade in precious and semi-precious minerals across their respective borders.

3. INDUSTRIAL MINERALS

146. Apart from considerations raised above, special attention needs to be paid to the role of industrial minerals in economic development. It was recognized that there was a real paucity of information on the availability of industrial minerals at the national level. Consequently, it was recommended that:

(i) Governments should establish an information base on their respective industrial mineral resources.

(ii) Despite the significant local content of industrial minerals undertakings, governments should subject these projects to the same rigorous assessment appraisals as done routinely in other minerals.

(iii) Regional governments should identify and support a regional institution to act as a repository for and disseminator to member governments on the available stock of industrial minerals in member countries and opportunities for consumption of the said minerals.

4. POLITICAL ISSUES

147. The Workshop recognized the overriding importance of political stability, which was considered both necessary and essential to an appropriate investment climate and the production of minerals. Concerted effort was therefore required to ensure the security of the investment and the safety of human and material resources involved in the mining developments.

VII. EXCURSIONS

148. Four excursions and visits were programmed as part of the Workshop activities, although only three were finally undertaken.

149. The first was a visit to the Trojan Mines, the Pindura Nickel Mines, the Cluff's Rebecca Mines/Wrida Gold Mine. This field trip was undertaken by 14 delegates representing 5 countries, a member of the ECA secretariat and an observer from the UN system. It gave participants an excellent opportunity to see two real cases of mineral development at work.

150. The Trojan Mine, apart from offering a greater opportunity to appreciate its geological endowment and processing technology, (washing plan, smelting and refining) also enabled participants to observe how a mine which was on the verge of closing down became an overwhelmingly profitable undertaking. The policy lessons learnt from the role of Government in the mineral sector, which was subject to great mineral price instability, were instructive. After a loss of Z$100 million over a four-year period, loss carry-forward provisions in existing legislation and very positive nickel prices have allowed the company to repay its debt, pay taxes and make dividend payment, while planning new exploration and development initiatives to ensure its survival.

151. At the Cluff Mine, it was seen how a unique opportunity was presented for 'fast-tracking' in mining development. With the imported heap-leaching technology of dealing with large volume low-grade deposits, the company was able to generate early revenues from superficial oxides, which allowed it to commit itself to larger and more comprehensive development of mining of deeper-level sulphure ores. This approach facilirated its introduction to the mining sector of Zimbabwe, while giving it greater confidence to participate in the country's economy. The openness of company representatives and their willingness to share their experiences was indeed commendable.

152. In the second tour, participants visited Craster Private Limited, an engineering company specialized in fabricating ball mills and water pumps for the mining sector. During their conducted tour of the factory, they viewed items ranging from water pumps and water filters to crop dryers manufactured by the company which funds its own fabrication activities.

153. Their next visit was to a factory, Central African Cables (CAFCA), where they were shown methods of moulding copper metal into copper wire for low voltage underground cables and overhead cables. They were also shown an aluminium wire fabricating plant for high voltage cables.

154. The Ellis Mathiesow, a company specialized in reconditioning electric motors and transformers for the mining sector and other manufacturing industry, was the next in the order of visits.

155. Also visited was Boart Zimbabwe company which manufactures mining drill bits and diamond drills, where the participants were shown the company's computer controlled process of making drills from tungsten carbide, nickel, copper alloys and industrial diamonds.

156. Then came Professional Engineers which manufactures mining hoists and underground locomotives except Deutz diesel engines the only imported components of the locomotives.

157. Finally was the visit to COCHRANE NGI Engineering, an industrial boiler and cool gasifier manufacturing industry which had gone into join venture with a Dutch Company for the manufacture of stroke water pumps. Its products were widely used in the SADCC region and its custom-designed engineering capabilities were second to none in Zimbabwe.

158. The KWEKWE TOUR was the third and covered Kwekwe (Midlands). It was undertaken by representatives of five member States and one observer from the World Bank. Participants had the opportunity to see the manufacture of wires and ropes by Zimbabwe Wire and Rope Private Ltd., a member of the Jupiter Holding Group/USA. Wires and ropes were fabricated from rods produced by Lancashire Steel (PVT).

159. Participants also visited the Zimbabwe Iron and Steel Company Ltd. (ZISCO) which processed iron ore into billets at its works at Redcliff. Products range from wires of 0.7 mm diameter to ropes of 32 mm diameter and were exported to Japan, USA and South Africa. Another visit covered Zimbabwe Mining and Smelting Corporations, a Division of Union Carbide (USA) which produced ferro-chrome alloys. The plant, which had 7 furnaces totalling 105 MW installed power, produced 180,000 MT per annum of high carbon ferro-chrome. Ore (513,000MT) was supplied by Shurubwe, Motomashanya and Lalapanji and almost all the production was exported to Japan and the USA. The last visit of the third tour covered the Gold Roasting plant, a parastatal company established to promote the control of national gold production by the Government. Set up in 1937, it converted complex ore concentrates from various mines into ingots which were sold to Zimbank.

CLOSING SESSION (Agenda item 11)

160. During the closing session of the workshop, the delegate of Cameroon expressed, on behalf of all delegates and observers, the appreciation of all the participants to the Government of Zimbabwe and the Economic Commission for Africa for having organised the event which had turned to be a very successful one. The ECA representative similarly thanked the Government of Zimbabwe for the excellent arrangements provided for the workshop and congratulated the active participation of all the delegates and observers. The ECA representative underlined the important roles of the participants in realizing the implementation of the recommendations of the workshop at the country levels. On his part the representative of the Government of Zimbabwe thanked all the participants for their varied contributions to the event and expressed the hope that the workshop report would be disseminated as widely as possible within the region.